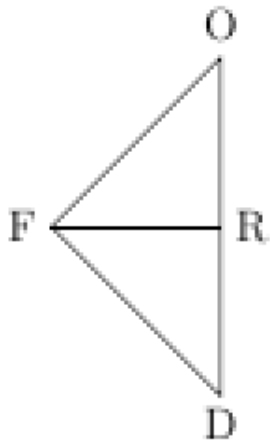


Topic: Triangle congruence with AAS, HL

Question: Which theorem would be used to prove the triangles congruent?



The following facts are given about $\triangle FOR$ and $\triangle FDR$.

$$\overline{FO} \cong \overline{FD}$$

$$\overline{FR} \perp \overline{OD}$$

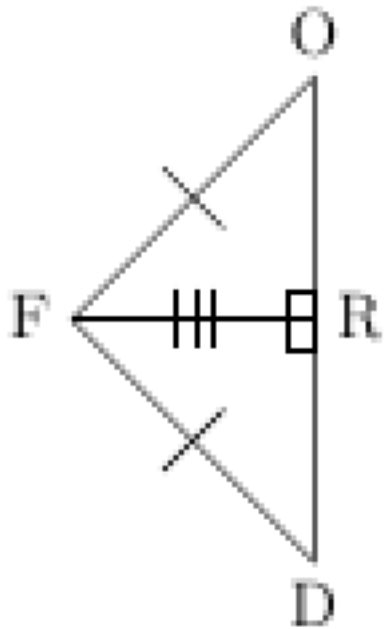
Answer choices:

- A SAS
- B AAS
- C HL
- D None of these



Solution: C

With the given information:



$\overline{FR} \perp \overline{OD}$, so $\angle FRO$ and $\angle FRD$ are right angles. It follows that $\triangle FRO$ and $\triangle FRD$ are right triangles.

Hypotenuse: $\overline{FO} \cong \overline{FD}$ because it is given information.

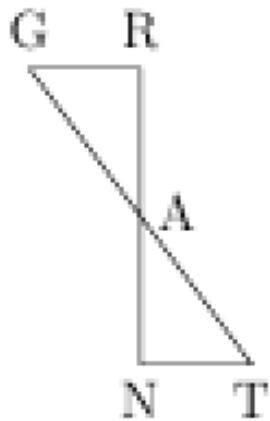
Leg: $\overline{FR} \cong \overline{FR}$ because of the reflexive property.

This makes the triangles congruent by HL.



Topic: Triangle congruence with AAS, HL

Question: Which theorem would be used to prove the triangles congruent?



The following facts are given about $\triangle GRA$ and $\triangle TNA$.

$$\overline{GR} \cong \overline{TN}$$

$\angle R$ and $\angle N$ are right angles.

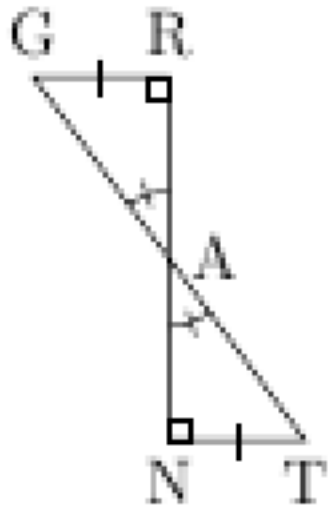
Answer choices:

- A SAS
- B AAS
- C HL
- D None of these



Solution: B

With the given information:



A: $\angle R$ and $\angle N$ are right angles, so $\angle R \cong \angle N$.

A: $\angle GAR \cong \angle TAN$ because vertical angles are congruent.

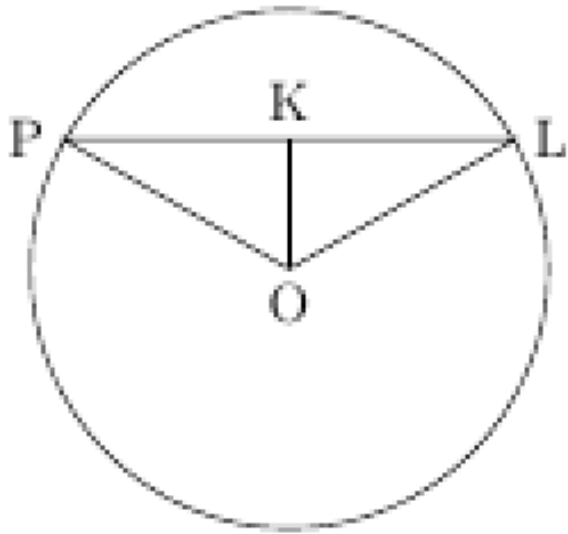
S: $\overline{GR} \cong \overline{TN}$ because it is given information.

This makes the triangles congruent by AAS.



Topic: Triangle congruence with AAS, HL

Question: Which theorem would be used to prove the triangles congruent?



In $\odot O$, $\overline{KO}$ bisects $\angle POL$.

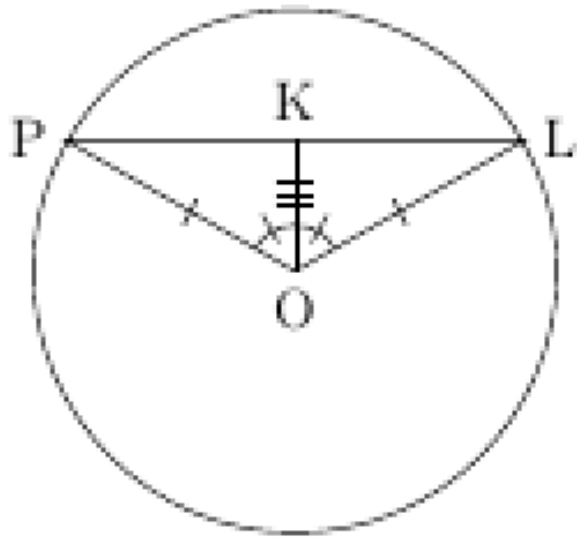
Answer choices:

- A ASA
- B AAS
- C HL
- D None of these



Solution: D

With the given information:



S: $\overline{OP} \cong \overline{OL}$ because radii of a circle are congruent.

A: $\angle POK \cong \angle LOK$ because an angle bisector forms two congruent angles.

S: $\overline{KO} \cong \overline{KO}$ by the reflexive property.

This makes the triangles congruent by SAS. SAS isn't one of the choices, so “None of these” is the correct choice.

